Table 3-7:
AEC Area Emissions- Parts Preparation Room Two

AEC Source: AECPP2	Equipment	Estimated Unrestricted New Media Use[1]	Constituents	CAS Number	Constituent Concentration (max wt%)	Media Cycles[2]	Emission Factor (lb/ton media)[3]	Uncontrolled Emissions		Control Equipment Efficiency (%)[4]	Controlled Emissions	
		lb/yr						lb/hr	lb/yr		lb/hr	lb/yr
	Titan 4848RPD Blast Cabinets (2)	50000	Aluminum Oxide	1344-28-1	100%	6	20	0.342	500	99%	0.0034	5.0
	Empire PF3648 Blast Cabinet	5000	Silicon Carbide	409-21-2	100%	10	20	0.057	50	95%	0.0029	2.5

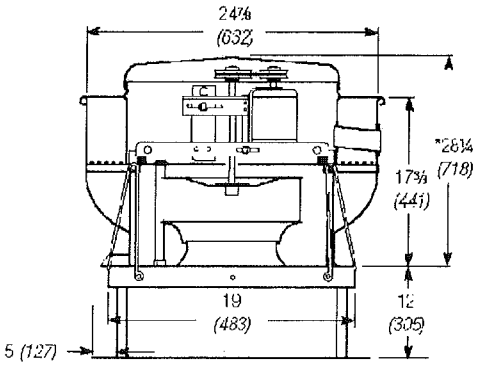
TAP Emissions Summary	TAP Type (24 hr or Annual Avgd EL)	Screening Emission Level (lb/hr)	Uncontrolled Emissions (lb/hr)	Controlled Emissions (lb/hr)	Controlled Emissions (lb/yr)
Aluminum	585 (24 hr)	0.667	0.342	0.0034	5.0
Silicon Carbide	585 (24 hr)	0.667	0.057	0.0029	2.5

HAP Emissions Summary	Controlled Emissions (tons/yr)
No known HAPs emitted	

Criteria Pollutant Emissions Summary	Uncontrolled Emissions		Controlled Emissions	
	(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
PM_{10}	0.40	0.28	0.0063	0.0038

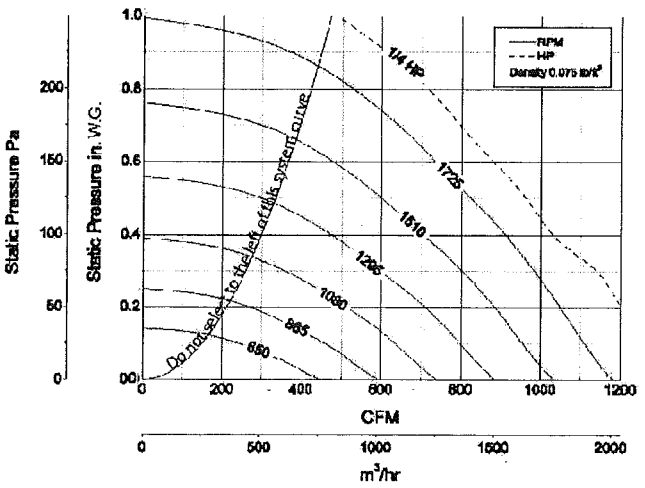
Notes: 1. Uncontrolled media usage based on maximum usage over last two years prorated up from ~2000 operating hours per year to 8760 hrs/yr operation.
2. NxEdge reuses aluminum oxide media for six cycles before discarding. Silicon carbide reuse estimated at 10 cycles.
3. From "Abrasive Blasting (Confined)," Bay Area AQMD, May 15, 1998, www.baaqmd.gov/pmt/handbook/s11c01pd.htm
4. Per Titan Abrasive Systems, control efficiency is 99.8% for particles 0.5 microns in size and larger. For calculations, 99% used.
Per Empire Abrasive Equipment, control efficiency is 99%. For calculations, 95% efficiency used.

H-CUBE-098 - Belt Drive



Damper Size = 12 x 12 *(305 x 305)*
Roof Opening = 14½ x 14½ *(368 x 368)*
Windband Thickness = 0.051 *(1.3)*
Motor Cover Thickness = 0.040 *(1.0)*
Curb Cap Thickness = 0.064 *(1.6)*
^Approximate Unit Weight = 58 lb. *(26 kg)*

All dimensions in inches *(millimeters)*.
*May be greater depending on motor.
^Weight shown is largest cataloged Open Drip Proof motor.



Model Number	HP (Size)	Fan RPM		CFM / Static Pressure in Inches WG									
				0	0.05	0.1	0.125	0.2	0.25	0.375	0.5	0.625	0.75
H-CUBE-098-4	1/4	650	CFM	445	357	239							
			BHP	0.01	0.01	0.01							
			Sones	8.1	8.5	9.9							
		755	CFM	516	442	352	301						
			BHP	0.02	0.02	0.02	0.02						
			Sones	8.3	8.4	8.9	9.3						
		860	CFM	588	523	453	409	258					
			BHP	0.02	0.02	0.02	0.02	0.02					
			Sones	8.4	8.4	8.5	8.7	9.1					
		985	CFM	660	600	543	509	392	294				
			BHP	0.03	0.03	0.03	0.04	0.04	0.04				
			Sones	8.7	8.6	8.6	8.5	8.6	8.6				
		1070	CFM	732	677	627	600	500	428				
			BHP	0.04	0.04	0.04	0.05	0.05	0.05				
			Sones	8.9	8.8	8.6	8.6	8.4	8.4				
		1175	CFM	804	752	708	684	603	537	350			
			BHP	0.06	0.06	0.06	0.06	0.06	0.06	0.06			
			Sones	9.3	9.2	9.0	8.9	8.7	8.6	8.2			
		1280	CFM	875	828	787	766	696	642	488			
			BHP	0.07	0.07	0.07	0.07	0.08	0.08	0.08			
			Sones	10.2	10.1	9.9	9.8	9.7	9.5	9.3			
		1385	CFM	947	903	864	845	785	738	603	448		
			BHP	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10		
			Sones	11.2	11.1	10.9	10.8	10.7	10.6	10.4	10.3		
		1490	CFM	1019	978	940	923	868	829	710	578	409	
			BHP	0.12	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	
			Sones	12.3	12.2	11.9	12.0	11.8	11.8	11.5	11.5	11.6	
		1595	CFM	1091	1053	1016	1000	950	914	813	692	560	
			BHP	0.14	0.14	0.14	0.14	0.14	0.15	0.16	0.16	0.16	
			Sones	13.2	13.1	12.8	12.8	12.5	12.5	12.3	12.1	12.2	
		1725	CFM	1180	1144	1109	1094	1049	1017	929	824	712	586
			BHP	0.18	0.18	0.18	0.18	0.18	0.18	0.20	0.20	0.20	0.20
			Sones	13.8	13.6	13.5	13.4	13.1	13.0	12.7	12.2	12.1	12.3

MAXIMUM BHP AT A GIVEN RPM = (RPM/3099)³
MAXIMUM RPM – 1725
TIP SPEED (ft/min.) = RPM x 2.846
MAXIMUM MOTOR FRAME SIZE = 56
AVERAGE DISCHARGE VELOCITY (FPM) – CFM/1.28

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft *(1.5 m)* in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical fan sone levels. The AMCA Certified Ratings Seal applies to sone ratings only.

RE: titan media blastersFrom: "Gary Wallace" <gwallace@nxedgeinc.com>
Subject: RE: titan media blasters
Date: Thu, April 3, 2008 3:06 pm
To: "Sarah Stine" <slstine@torf.us>

Saarah,
Here's the info you asked for regarding the titan blaster room fan.

make: greenheck
model: H-cube-098-4
cfm rating: 1180 @ 0 s.p.
pipe size: 14 x 14 sq.
height above roof: 39"
release orientation: upward
raincapped?: yes
distance from: east wall= 7'
north wall= 40'

Gary

-----Original Message-----
From: Sarah Stine [mailto:slstine@torf.us]
Sent: Wednesday, April 02, 2008 2:11 PM
To: Gary Wallace
Cc: mtorf@torf.us
Subject: RE: titan media blasters

Gary-
I have rooftop exhaust specs for the Empire blaster room, but not the Titan room- this must have been a later addition.
DEQ will require that this emission point be included in the air permit.
Unfortunately this means more questions from me.

Titan blasting room exhaust info needs:
Roof top fan Make and Model
Roof top fan cfm rating
Exhaust pipe size (diameter or opening dimensions)
Exhaust outlet height above roof
Exhaust release orientation (horizontal, upward, downward, angled)
Is vertical exhaust diverted (raincapped?)
Location (distance to north and east roof edges)

This is what I have on the Empire room exhaust (please verify):
No separate roof fan- using Empire DCM-80A exhaust fans
1 hp exhaust fans
6" D roof-top exhaust
3.4 feet from roof to raincap vent

Thank You,
Sarah

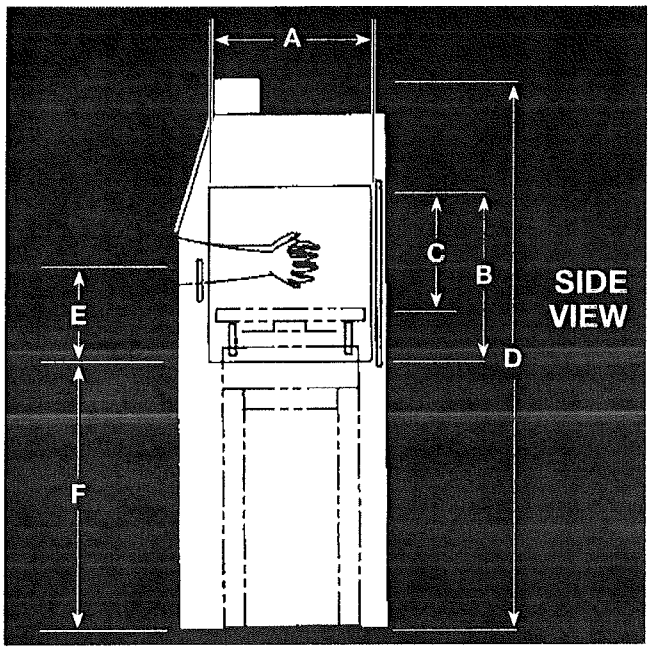
Sarah Stine, P.E.
slstine@torf.us
208.571.2393 FAX: 208.345.8285

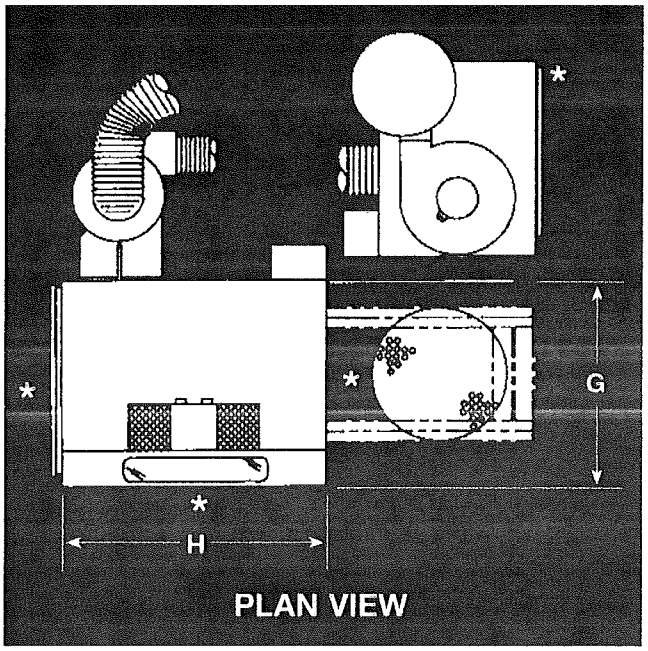
TORF Environmental Management
www.torf.us

PRO-FINISH DIMENSIONS

Standard Cabinets (See "SIDE VIEW" for A, B, C, D, E, and F. See "PLAN VIEW" for G, H, floor area and access points.)

CABINET MODEL SIZE	2636	3648	3674	4848	6060	7272
A) Door opening depth (ID)	20"	29"	29"	41"	50"	64"
B) Door opening height (ID)	22"	32"	32"	32"	40"	58"
C) Height from turntable to top of door opening						
Stationary manual turntable	17"	27"	–	27"	35"	–
Rolling manual turntable	15"	25"	25"	25"	33"	44"
Rolling powered turntable	–	21"	21"	21"	29"	38"
Low-profile turntable	20"	30"	–	30"	38"	–
D) Exterior height	72"	75"	75"	75"	80"	84"
E) Height from enclosure floor to glove-entry midpoint	10"	10"	10"	10"	10"	25" to 29"
F) Height from cabinet base to enclosure floor	34"	34"	34"	34"	34"	28"
G) Cabinet depth (exterior)	26"	36"	36"	48"	60"	72"
H) Cabinet width (exterior)	36"	48"	74"	48"	60"	72"
Floor area	42 ft^2	59 ft^2	90 ft^2	80 ft^2	87 ft^2	163 ft^2
Access points	*	*	*	*	*	*





NOTES TO CABINET DIMENSIONS

• System shown includes cabinet, reclaimer, dust collector, turntable and some popular options. (Other configurations and options will affect dimensions, which are approximate and subject to change.) • Dust collector, reclaimer and options can be rearranged within limits to suit particular installations. • Floor areas shown indicate basic reclaimer/dust-collector sizes and include operator access points as well as turntable and platform. • Height includes reclaimer and dust-collection hose.

Dust Collectors

MODEL	DCM-80A	DCM-200	DCM-200A	DCM-200B	CDC-6	CDC-9	CDC-12
Dimensions (DxWxH)	21"x26"x98"	34"x39"x107"	34"x39"x105"	34"x39"x116"	34"x39"x115"	34"x39"x115"	34"x39"x118"
With Sound Attenuator & Automatic Bag Shaker	29"x31"x107"	40"x41"x112"	40"x39"x112"	40"x39"x127"	–	–	–
With Sound Attenuator & Photohelic Package	–	–	–	–	34"x48"x120"	34"x48"x120"	34"x48"x123"

Dust Bags

Dimensions (DxWxH):	24"x30"x83"

GENERAL SPECIFICATIONS

Cabinet Model	2636	3648	4848	6060	7272
Interior Dimensions (DxWxH)	26x36x30	36x46x36	48x48x36	60x60x44	72x72x62
Overall Dimensions cabinet only (DxWxH)	28x42x70	38x54x72	50x54x72	62x66x78	74x75x89
Door Opening (HxW)	22x20	32x29	32x41	40x50	58x64
Number of Doors (Standard)	1	2	2	2	1
Ceramic Nozzle*	3/16	3/16	3/16	3/16	3/16
Ceramic Nozzle†	5/16	5/16	5/16	5/16	5/16
Air Jet†	5/32	5/32	5/32	5/32	5/32
Piping Size*	1	1	1	1	1
Piping Size†	1/2	1/2	1/2	1/2	1/2

*Pressure Cabinets †Suction Cabinets **Note:** Dimensions are nominal (inches).

RECLAIMER SPECIFICATIONS

Cabinet Model	2636	3648	4848	6060	7272
Ventilation Rate (CFM)	460	400 or 600	600 or 900	900	900 or 1200
Exhaust Fan Motor	1 hp	1 or 1-1/2 hp	1 or 1-1/2 hp	2 hp	2 or 5 hp

OTHER FEATURES

• Rubber cloth-lined gloves • Two 90-watt flood lights (three in the 6060 and 7272 models) • Dust-off gun • Pneumatic foot-treadle control • 14" x 22" safety-glass window with quick-change frame • Air-pressure regulator and gauge • General-purpose filter • Media regulator • Leveling bolts • Patented OSHA door switch • 14-gauge construction • 3/16" perforated floor with 1,000-pound capacity • One-cubic-foot, ASME pressure vessel on pressure units • Your choice of either bag-house or cartridge-type dust collector

Do not use silica sand in a hand cabinet. Before ordering, consult your local Distributor for application considerations that may affect the performance of your system. For information on standard electrical hookups and air consumption, see our Pro-Finish catalog.

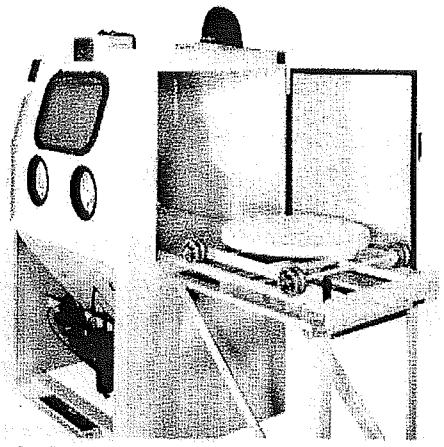
BEST WARRANTY IN THE INDUSTRY
Three years limited on parts and labor

Information subject to change without notice.

OPTIONS

Additional guns can be used with oscillation units and powered turntables to automate the system. Pro-Finish systems can be upgraded to a total of four suction guns or two pressure nozzles.

Turntables facilitate handling of heavy parts. *(Manual turntable shown)*



Rotating basket with timer controls speeds processing of smaller parts.

Fixed-gun holder with movable arm frees both of operators hands for parts blasting.

Extended-wear options prolong equipment life while minimizing maintenance and downtime. Options offered include: rubber curtains in black or white—for improved, long-lasting visibility; window protectors; heavy-duty, media-transport duct; and DiCarb® or boron nozzles. Reclaimers can be upgraded with replaceable wearplates and urethane or Ultrawear linings.

Automatic bag shaker frees operator for other tasks with bag-house dust collectors.

Fully automatic photohelic controls purge dust from cartridge-type collectors without operator assistance.

Rubber safety mats, placed around Pro-Finish cabinets, keep the immediate work area clean and reduce operator fatigue.

OTHER EMPIRE PRODUCTS

• A full range of cabinets—economy to custom
• FaStrip® plastic-media systems
• Automated blast systems
• Blast rooms
• Portable blasters

EMPIRE™
ABRASIVE EQUIPMENT
2101 West Cabot Boulevard, Langhorne, PA 19047-1893
CALL: (215) 752-6800 E-MAIL: Airblast@empire-airblast.com
FAX: (215) 752-6373 VISIT: www.empire-airblast.com

PRO-FINISH MEDIA RECLAIMERS

Media reclamation can be one of the most critical aspects of air-blasting processes. In addition to media costs, reclaimer performance affects operating speed and quality. Failure to remove dust and fines has an adverse effect on consistency and productivity. If oversized particles are returned to the blast system, for example, clogging and/or inconsistent results often occur.

Pro-Finish reclaimers provide precise control of media recycling. These reclaimers can be adjusted to control the recovery of fine, medium or coarse working materials while removing unwanted particles from the blasting process. As a result, you enjoy reduced media costs as well as consistent, high-quality results.

All Pro-Finish reclaimers deliver 99% efficiency, include a screen to prevent over-sized particles from clogging, provide an easy-open access door for quick cleaning and filling, and feature 12-gauge construction for extended service life.

Media/Reclaimer Compatibility

RECLAIMER CFM	GLASS BEADS	ALUMINUM OXIDE	STEEL GRIT	STEEL SHOT
400	ALL	46	120	S-70
600	ALL	36	80	S-110
900	ALL	36	80	S-110
1200	ALL	30	40	S-170

Chart shows the maximum media sizes recoverable with single-gun/nozzle systems. Multiple guns, larger nozzles, operation at altitudes above 5000 feet, or use of a 50-Hz electrical supply may require a larger reclaimer and dust-collector blower. **Larger sizes may be used. Consult factory.**

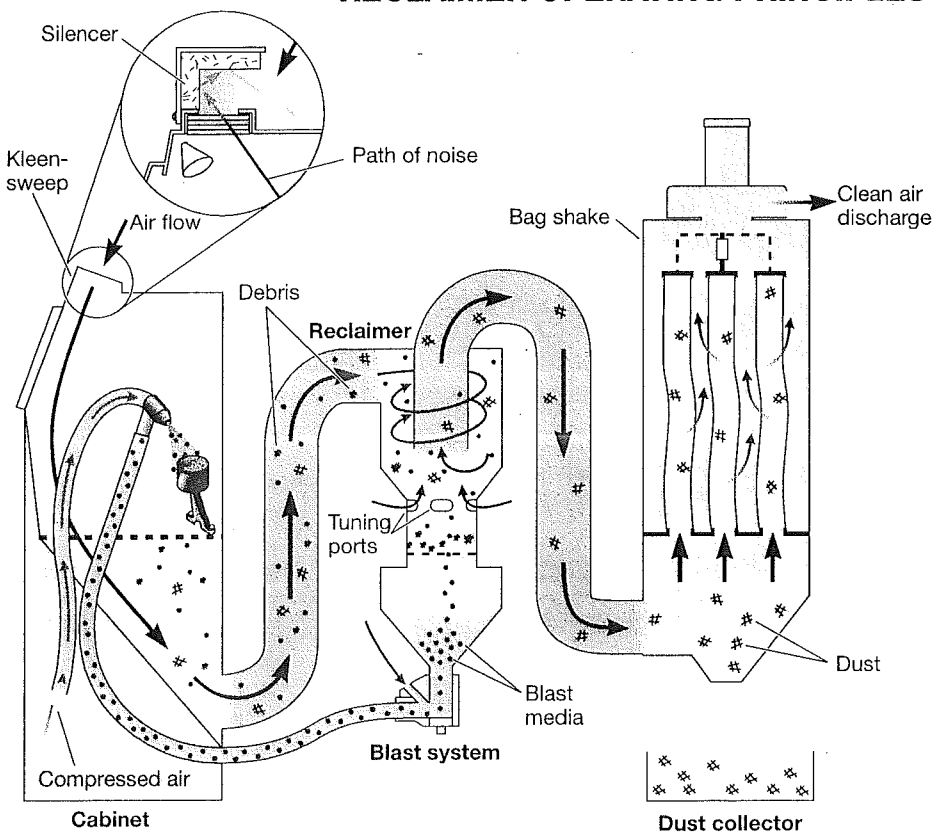
RECLAIMER OPERATING PRINCIPLES

All Pro-Finish media reclaimers are tunable. By adjusting a fine-tuning band on the reclaimer, the amount of air introduced into the system can be controlled to assure precise separation of functional media from dust and other unwanted debris.

As spent media, dust and debris are pulled by air flow to the reclaimer inlet, incoming air and media spiral in a downward vortex, throwing larger particles against the outer reclaimer wall. An air stream forms an upward counter vortex through the center tube, which carries out dust while heavier particles drop into the storage hopper below for reuse. A screen catches any oversized debris.

Dust and undersized debris are drawn from the reclaimer into the bottom of the dust collector. Sudden expansion forces heavier dust particles to the bottom. Remaining fine dust is pulled to the surface of the dust filters. Clean air can then be discharged to the work area.

NOTE: The CFM of all Pro-Finish reclaimers is rated at nominal static working pressure of 6" water, with the exception of the 1200 CFM model, rated at 10" static pressure. Competitive units may appear to achieve higher CFM due to ratings based on inadequate working static pressure.



PRO-FINISH DUST COLLECTORS

Available in both bag- and cartridge-type designs, Pro-Finish dust collectors improve working conditions while reducing maintenance and operating costs. By capturing 99% of all particles one micron or larger, these efficient dust collectors permit filtered air to be recirculated into the plant, thus providing significant savings on heating and air conditioning.

Other features of Pro-Finish dust collectors include:

- Fan blade on clean-air side for long life
- 14-gauge, reinforced construction
- Raised clean-out opening for fast waste removal
- Top-clean air discharge for operator comfort
- Easy push-button control for thorough cleaning
- Cartridge models for simplified maintenance

Treibacher Schleifmittel North America, Inc.
2000 College Avenue MPO Box 1438
Niagara Falls, NY 14302

Material Safety Data Sheet

TSN MSDS No. 010 **Page 1 of 4**

SECTION I PRODUCT IDENTIFICATION

MATERIAL NAME AND TRADE NAMES:

Silicon Carbide:
SiC, SAS, SiC-DCF, 200/F SiC, 280/F SiC, SAS Carbonite, Green Silicon Carbide SiC – ST

HMIS

Health	1
Flammability	0
Reactivity	0
Personal Protection	E

DATE PREPARED: January 3, 2006 (supersedes 4/15/03)

EMERGENCY TELEPHONE NUMBER: (716) 286-1234

CHEMICAL NAME AND SYNONYMS: **CHEMICAL FAMILY:** **FORMULA:**

Silicon Carbide — Refractory Carbide — NA

SECTION II HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

INGREDIENT:	TYPICAL CAS #	%	OSHA PEL	ACGIH TLV	LISTED AS CARCINOGEN
Silicon Carbide	409-21-2	98	10 mg/m^3*	10 mg/m^3	No
Silicon Dioxide	14808-60-7	0-0.1	0.1 mg/m^3	0.1 mg/m^3	Yes**
Silicon Dioxide	14464-46-1	0-0.05	0.05 mg/m^3	0.05 mg/m^3	Yes**

*Respirable Dust is 5 mg/m^3
**Listed as Carcinogen by International Agency for Research on Cancer (IARC)

SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

MELTING POINT (°C): 2500°C	SPECIFIC GRAVITY (H20 = 1): 3.2
BOILING POINT (°C):	NA
PERCENT VOLATILES BY VOLUME (%):	NA
VAPOR PRESSURE (mmHg):	Essentially 0
EVAPORATION RATE (Butyl Acetate = 1):	NA
VAPOR DENSITY (Air = 1):	NA
SOLUBILITY IN WATER:	Insoluble
ODOR: None	APPEARANCE: Black or Green

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: Nonflammable FLAMMABLE LIMITS: NA
EXTINGUISHING MEDIA: NA
SPECIAL FIRE FIGHTING PROCEDURES: NA
UNUSUAL FIRE AND EXPLOSION HAZARD: NA
BASIC FIREFIGHTING PROCEDURES: This material does not give a flash point by conventional test methods. Use extinguishing agent suitable for type of surrounding fire.

Emissions Unit - General **Form EU0**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
03/27/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

Company Name:	Facility Name:	Facility ID No:
NxEdge, Inc.		001-00202
Brief Project Description:	Facility Equipment and Throughput Modifications	

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

1. Emissions Unit (EU) Name:	C&R PARTS PREP ROOM
2. EU ID Number:	CAMBC
3. EU Type:	☐ New Source ☐ Unpermitted Existing Source ☒ Modification to a Permitted Source -- Previous Permit #:p-040007 Date Issued: 7/22/2005
4. Manufacturer:	EMPIRE ABRASIVE EQUIPMENT
5. Model:	EMPIRE PF-3648 CABINETS (2)
6. Maximum Capacity:	800 CFM EXHAUST
7. Date of Construction:	2004
8. Date of Modification (if any)	
9. Is this a Controlled Emission Unit?	☐ No ☒ Yes If Yes, complete the following section. If No, go to line 18.

EMISSIONS CONTROL EQUIPMENT

10. Control Equipment Name and ID:	Reclaimer w/ Dust Collector (2)		
11. Date of Installation:	2004	12. Date of Modification (if any):	
13. Manufacturer and Model Number:	Empire DCM-80A		
14. ID(s) of Emission Unit Controlled:	CAMBC		
15. Is operating schedule different than emission units(s) involved?	☐ Yes ☒ No		
16. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☒ No (If Yes, attach and label manufacturer guarantee)		

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency	99%	99%				

17. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

18. Actual Operation	48 HRS/WEEK, 50 WEEKS/YR (NON-CONTINUOUS)
19. Maximum Operation	8760 HRS/YR

REQUESTED LIMITS

20. Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, check all that apply below)
☐ Operation Hour Limit(s):	
☐ Production Limit(s):	
☒ Material Usage Limit(s):	19,000 LB/YR TOTAL MEDIA
☐ Limits Based on Stack Testing	Please attach all relevant stack testing summary reports
☐ Other:	
21. Rationale for Requesting the Limit(s):	EMISSIONS MUST BE CONTROLLED TO COMPLY WITH AMBIENT AIR QUALITY STANDARDS

3.8 C&R Parts Preparation Room

Two media blasting cabinets are located in a small room in the Cleaning and Refurbishment (C&R) area. This area was previously referred to as the Engineered Coatings (EC) Area. The cabinets are equipped with reclaimer cyclones and filter units, and vent into a common 6" exhaust duct that emits outside above the building roof. The exhaust is equipped with a rain-cap and is shown as EP-4 on Form PP. These cabinets and emission point were included in the previous permit (CAMBC). For this permit application, the uncontrolled emissions analysis from this source is modified.

Aluminum oxide media (150 grit) and glass bead (fibrous glass) are used in the cabinets to clean parts for customers. The cabinets are both Empire Model PF3648 with DCM-80A dust collectors. A specification sheet for the Empire cabinet is attached. Per the manufacturer's published material, the emission control efficiency of this unit is 99%.

Based on NxEdge purchase records for the last two years, aluminum oxide (Al Ox) media usage in these two cabinets has been 2,100-2,000 pounds per year, and glass bead media usage in these two cabinets has been 1650 pounds per year.[20] NxEdge's media purchase records are provided in Table 3.6B. NxEdge currently operates 40-48 hours per week. To estimate uncontrolled emissions (continuous operations), current media usage is prorated up to 24/7 operation year-round. This equals 11,000 pounds of new aluminum oxide and 9,000 pounds of glass bead media per year.

Aluminum oxide is a durable media that can last through multiple blasting cycles. NxEdge uses the media approximately six times before disposing and replacing with cabinet inventory with fresh aluminum oxide.[21] Glass bead is less durable than aluminum oxide, with a hardness index half of that of aluminum oxide.[22] The glass bead media is assumed to be used four times before disposal.

Emissions from the C&R Prep Room are estimated in Table 3.8. Uncontrolled emissions are based on the unrestricted media usage and media recycle rates described above, and an emission factor for unabated blasting of 20 pounds PM_{10} emissions per ton of abrasive (in developing the emission factor all particles emitted were considered to be PM_{10} so the PM_{10} rate is equal to the constituent rate).[23] Controlled aluminum oxide, fibrous glass, and particulate emissions from the AEC Parts Prep Room are estimated in Table 3.8 using a control equipment efficiency of 95 wt%.

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[20] "February 2008 Purchase Records," email correspondence, Sherry Jenkins (NxEdge) to Sarah Stine (TEM), March 7, 2008.
[21] "RE: Air Permit Question- AEC Area," email correspondence, Carl Seelhoof (NxEdge) to Sarah Stine (TEM), May 14, 2008.
[22] "Abrasive Blasting (Confined)," Bay Area Air Quality Management District, May 15, 1998, www.baaqmd.gov/pmt/handbook/s11c01pd.htm.
[23] Ibid.

The C&R Parts Prep Room is the only known source of fibrous glass dust emissions at the facility and the uncontrolled emission rate of 0.037 lb/hr fibrous glass is less than the TAP screening emission level of 0.667 lb/hr. Therefore, fibrous glass dust was not included in the facility's air dispersion modeling. The uncontrolled emission rate of aluminum oxide and controlled emission rates of PM_{10} are included in the air dispersion modeling for this application (see Section 7). Because the resulting ambient air concentrations are within acceptable levels, only a permit condition on general media use is proposed. The proposed permit limit is 19,000 lb/yr of new media used in AEC Parts Prep Room Two.

Table 3-8:
Cleaning and Refurbishment Area Emissions- Parts Preparation Room

C&R Source: CAMBC	Equipment	Estimated Unrestricted New Media Usage[1] lb/yr	Constituents	CAS Number	Constituent Concentration (max wt%)	Media Cycles[2]	Emission Factor (lb/ton media)[3]	Uncontrolled Emissions lb/hr	Uncontrolled Emissions lb/yr	Control Equipment Efficiency (%)[4]	Controlled Emissions lb/hr	Controlled Emissions lb/yr
	Empire PF3648 Blast Cabinet	11000	Aluminum Oxide	1344-28-1	100%	6	20	0.075	660	95%	0.0038	33.0
	Empire PF3648 Blast Cabinet	8000	Glass Bead (Fibrous Glass)	65997-17-3	100%	4	20	0.037	320	95%	0.0018	16.0

TAP Emissions Summary	TAP Type (24 hr or Annual Avgd EL)	Screening Emission Level (lb/hr)	Uncontrolled Emissions (lb/hr)	Controlled Emissions (lb/hr)	Controlled Emissions (lb/yr)
Aluminum	585 (24 hr)	0.667	0.075	0.0038	33.0
Fibrous Glass Dust	585 (24 hr)	0.667	0.037	0.0018	16.0

HAP Emissions Summary	Controlled Emissions (tons/yr)
No known HAPs emitted	

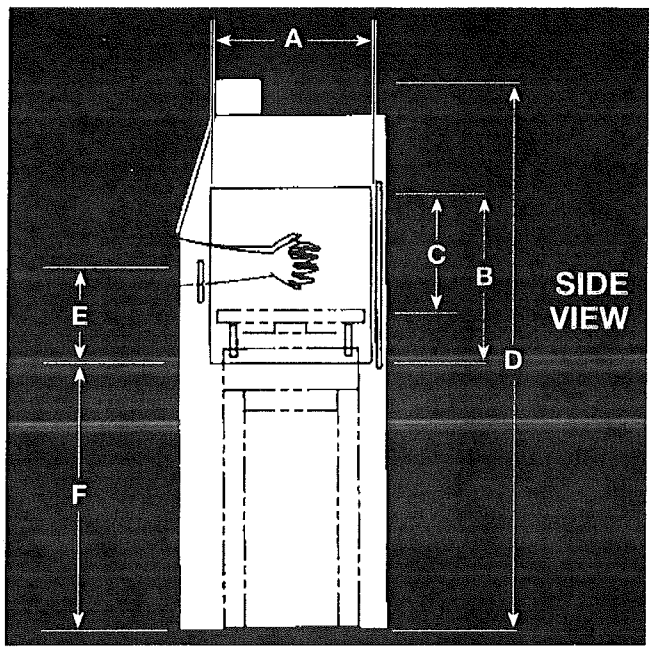
Criteria Pollutant Emissions Summary	Uncontrolled Emissions (tons/yr)	Controlled Emissions (lb/hr)	Controlled Emissions (tons/yr)
PM_{10}	0.49	0.0056	0.0245

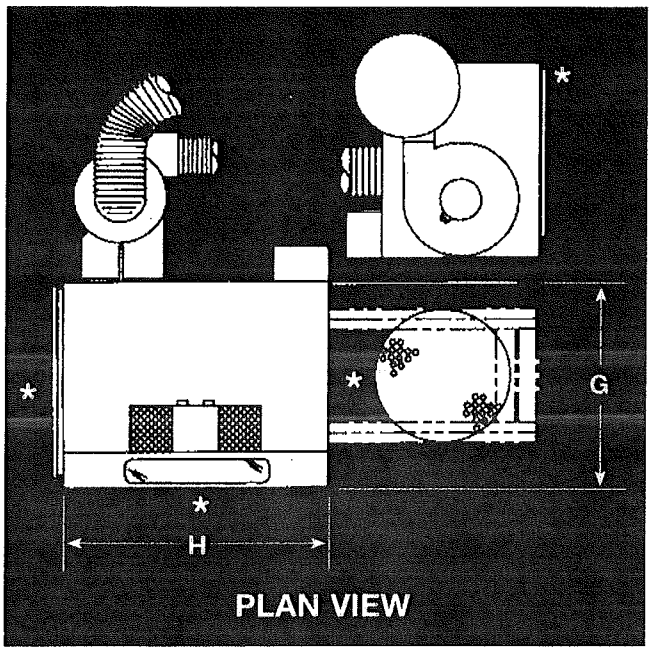
Notes: 1. Uncontrolled media usage based on maximum usage over last two years prorated up from ~2000 operating hours per year to 8760 hrs/yr operation.
2. NxEdge reuses aluminum oxide media for six cycles before discarding. Glass bead reuse estimated at 4 cycles.
3. From "Abrasive Blasting (Confined)," Bay Area AQMD, May 15, 1998, www.baaqmd.gov/pmt/handbook/s11c01pd.htm
4. Per Empire Abrasive Equipment, control efficiency is 99%. For calculations, 95% efficiency used.

PRO-FINISH DIMENSIONS

Standard Cabinets (See "SIDE VIEW" for A, B, C, D, E, and F. See "PLAN VIEW" for G, H, floor area and access points.)

CABINET MODEL SIZE	2636	3648	3674	4848	6060	7272
A) Door opening depth (ID)	20"	29"	29"	41"	50"	64"
B) Door opening height (ID)	22"	32"	32"	32"	40"	58"
C) Height from turntable to top of door opening						
Stationary manual turntable	17"	27"	–	27"	35"	–
Rolling manual turntable	15"	25"	25"	25"	33"	44"
Rolling powered turntable	–	21"	21"	21"	29"	38"
Low-profile turntable	20"	30"	–	30"	38"	–
D) Exterior height	72"	75"	75"	75"	80"	84"
E) Height from enclosure floor to glove-entry midpoint	10"	10"	10"	10"	10"	25" to 29"
F) Height from cabinet base to enclosure floor	34"	34"	34"	34"	34"	28"
G) Cabinet depth (exterior)	26"	36"	36"	48"	60"	72"
H) Cabinet width (exterior)	36"	48"	74"	48"	60"	72"
Floor area	42 ft^2	59 ft^2	90 ft^2	80 ft^2	87 ft^2	163 ft^2
Access points	*	*	*	*	*	*





NOTES TO CABINET DIMENSIONS

• System shown includes cabinet, reclaimer, dust collector, turntable and some popular options. (Other configurations and options will affect dimensions, which are approximate and subject to change.) • Dust collector, reclaimer and options can be rearranged within limits to suit particular installations. • Floor areas shown indicate basic reclaimer/dust-collector sizes and include operator access points as well as turntable and platform. • Height includes reclaimer and dust-collection hose.

Dust Collectors

MODEL	DCM-80A	DCM-200	DCM-200A	DCM-200B	CDC-6	CDC-9	CDC-12
Dimensions (DxWxH)	21"x26"x98"	34"x39"x107"	34"x39"x105"	34"x39"x116"	34"x39"x115"	34"x39"x115"	34"x39"x118"
With Sound Attenuator & Automatic Bag Shaker	29"x31"x107"	40"x41"x112"	40"x39"x112"	40"x39"x127"	–	–	–
With Sound Attenuator & Photohelic Package	–	–	–	–	34"x48"x120"	34"x48"x120"	34"x48"x123"

Dust Bags

Dimensions (DxWxH):	24"x30"x83"

GENERAL SPECIFICATIONS

Cabinet Model	2536	3648	4848	6060	7272
Interior Dimensions (DxWxH)	26x36x30	36x48x36	48x48x36	60x60x44	72x72x62
Overall Dimensions cabinet only (DxWxH)	28x42x70	38x54x72	50x54x72	62x66x78	74x75x89
Door Opening (HxW)	22x20	32x29	32x41	40x50	58x64
Number of Doors (Standard)	1	2	2	2	1
Ceramic Nozzle*	3/16	3/16	3/16	3/16	3/16
Ceramic Nozzle†	5/16	5/16	5/16	5/16	5/16
Air Jet†	5/32	5/32	5/32	5/32	5/32
Piping Size*	1	1	1	1	1
Piping Size†	1/2	1/2	1/2	1/2	1/2

*Pressure Cabinets †Suction Cabinets Note: Dimensions are nominal (inches).

RECLAIMER SPECIFICATIONS

Cabinet Model	2636	3648	4848	6060	7272
Ventilation Rate (CFM)	400	400 or 600	600 or 900	900	900 or 1200
Exhaust Fan Motor	1 hp	1 or 1-1/2 hp	1 or 1-1/2 hp	2 hp	2 or 5 hp

OTHER FEATURES

• Rubber cloth-lined gloves • Two 90-watt flood lights (three in the 6060 and 7272 models) • Dust-off gun • Pneumatic foot-treadle control • 14" x 22" safety-glass window with quick-change frame • Air-pressure regulator and gauge • General-purpose filter • Media regulator • Leveling bolts • Patented OSHA door switch • 14-gauge construction • 3/16" perforated floor with 1,000-pound capacity • One-cubic-foot, ASME pressure vessel on pressure units • Your choice of either bag-house or cartridge-type dust collector

Do not use silica sand in a hand cabinet. Before ordering, consult your local Distributor for application considerations that may affect the performance of your system. For information on standard electrical hookups and air consumption, see our Pro-Finish catalog.

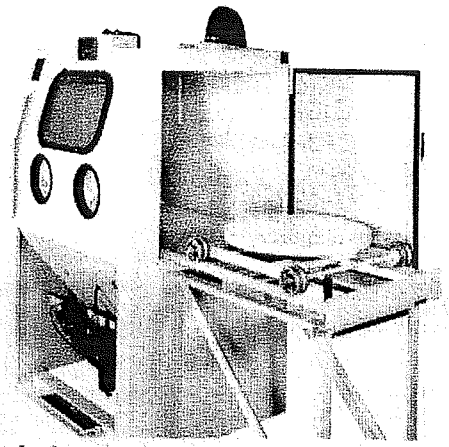
BEST WARRANTY IN THE INDUSTRY
Three years limited on parts and labor

Information subject to change without notice.

OPTIONS

Additional guns can be used with oscillation units and powered turntables to automate the system. Pro-Finish systems can be upgraded to a total of four suction guns or two pressure nozzles.

Turntables facilitate handling of heavy parts. *(Manual turntable shown)*



Rotating basket with timer controls speeds processing of smaller parts.

Fixed-gun holder with movable arm frees both of operators hands for parts blasting.

Extended-wear options prolong equipment life while minimizing maintenance and downtime. Options offered include: rubber curtains in black or white—for improved, long-lasting visibility; window protectors; heavy-duty, media-transport duct; and DiCarb® or boron nozzles. Reclaimers can be upgraded with replaceable wearplates and urethane or Ultrawear linings.

Automatic bag shaker frees operator for other tasks with bag-house dust collectors.

Fully automatic photohelic controls purge dust from cartridge-type collectors without operator assistance.

Rubber safety mats, placed around Pro-Finish cabinets, keep the immediate work area clean and reduce operator fatigue.

OTHER EMPIRE PRODUCTS

- A full range of cabinets—economy to custom
- FaStrip® plastic-media systems
- Automated blast systems
- Blast rooms
- Portable blasters

EMPIRE™
ABRASIVE EQUIPMENT
2101 West Cabot Boulevard, Langhorne, PA 19047-1893
CALL: (215) 752-8800 E-MAIL: Airblast@empire-airblast.com
FAX: (215) 752-9373 VISIT: www.empire-airblast.com

PRO-FINISH MEDIA RECLAIMERS

Media reclamation can be one of the most critical aspects of air-blasting processes. In addition to media costs, reclaimer performance affects operating speed and quality. Failure to remove dust and fines has an adverse effect on consistency and productivity. If oversized particles are returned to the blast system, for example, clogging and/or inconsistent results often occur.

Pro-Finish reclaimers provide precise control of media recycling. These reclaimers can be adjusted to control the recovery of fine, medium or coarse working materials while removing unwanted particles from the blasting process. As a result, you enjoy reduced media costs as well as consistent, high-quality results.

All Pro-Finish reclaimers deliver 99% efficiency, include a screen to prevent over-sized particles from clogging, provide an easy-open access door for quick cleaning and filling, and feature 12-gauge construction for extended service life.

Media/Reclaimer Compatibility

RECLAIMER CFM	GLASS BEADS	ALUMINUM OXIDE	STEEL GRIT	STEEL SHOT
400	ALL	46	120	S-70
600	ALL	36	80	S-110
900	ALL	36	80	S-110
1200	ALL	30	40	S-170

Chart shows the maximum media sizes recoverable with single-gun/nozzle systems. Multiple guns, larger nozzles, operation at altitudes above 5000 feet, or use of a 50-Hz electrical supply may require a larger reclaimer and dust-collector blower. **Larger sizes may be used. Consult factory.**

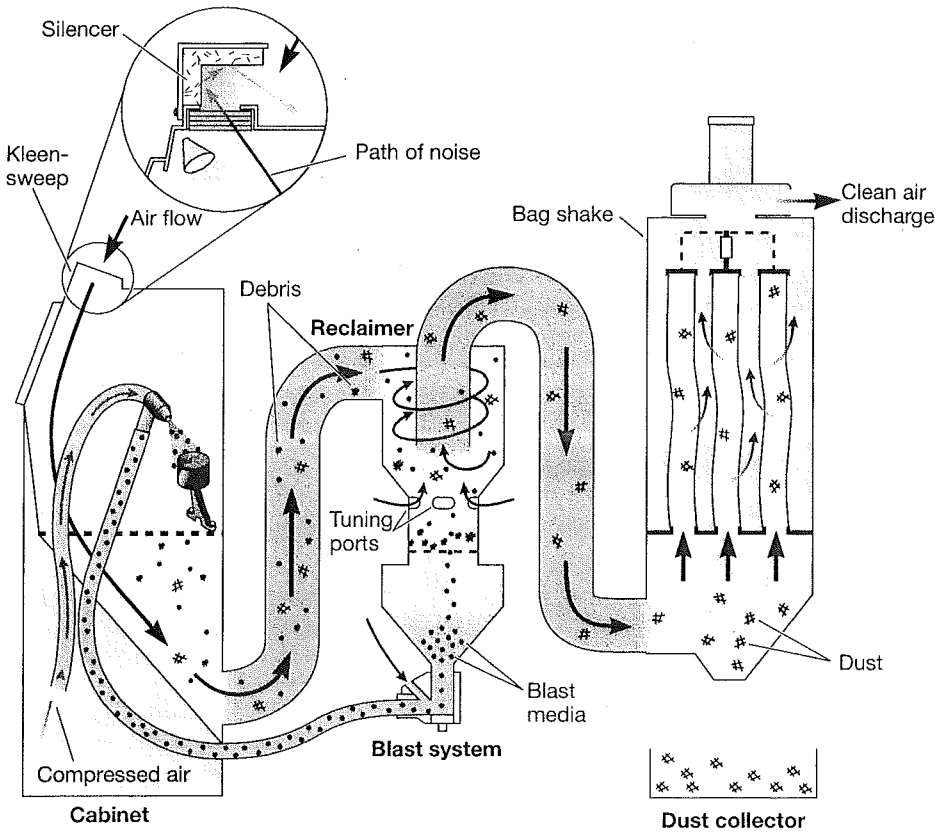
RECLAIMER OPERATING PRINCIPLES

All Pro-Finish media reclaimers are tunable. By adjusting a fine-tuning band on the reclaimer, the amount of air introduced into the system can be controlled to assure precise separation of functional media from dust and other unwanted debris.

As spent media, dust and debris are pulled by air flow to the reclaimer inlet, incoming air and media spiral in a downward vortex, throwing larger particles against the outer reclaimer wall. An air stream forms an upward counter vortex through the center tube, which carries out dust while heavier particles drop into the storage hopper below for reuse. A screen catches any oversized debris.

Dust and undersized debris are drawn from the reclaimer into the bottom of the dust collector. Sudden expansion forces heavier dust particles to the bottom. Remaining fine dust is pulled to the surface of the dust filters. Clean air can then be discharged to the work area.

NOTE: The CFM of all Pro-Finish reclaimers is rated at nominal static working pressure of 6" water, with the exception of the 1200 CFM model, rated at 10" static pressure. Competitive units may appear to achieve higher CFM due to ratings based on inadequate working static pressure.



PRO-FINISH DUST COLLECTORS

Available in both bag- and cartridge-type designs, Pro-Finish dust collectors improve working conditions while reducing maintenance and operating costs. By capturing 99% of all particles one micron or larger, these efficient dust collectors permit filtered air to be recirculated into the plant, thus providing significant savings on heating and air conditioning.

Other features of Pro-Finish dust collectors include:

- Fan blade on clean-air side for long life
- 14-gauge, reinforced construction
- Raised clean-out opening for fast waste removal
- Top-clean air discharge for operator comfort
- Easy push-button control for thorough cleaning
- Cartridge models for simplified maintenance

(610) 341- 1078

NxEdge PTC Modification

AEC Area MSDS
Glass Bead Media

Potters Industries Inc.
an affiliate of PQ Corporation

MSDS
MATERIAL SAFETY DATA SHEET

Trade Name: **BALLOTINI IMPACT BEADS**
Date Prepared: **01/17/07**

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name:	BALLOTINI IMPACT BEADS
Product description:	Spherical glass beads.
Manufacturer:	Potters Industries, Inc. P. O. Box 840 Valley Forge, PA 19482 USA
Telephone:	610-651-4200
In case of emergency call:	610-651-4200
For transportation emergency Call CHEMTREC:	800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical and Common Name	*CAS Registry Number*	*Wt. %*	*OSHA PEL*	*ACGIH TLV*
Glass, oxide; Glass	65997-17-3	~100%	15mg/m^3 total dust, 5mg/m^3 respirable	10 mg/m^3 inhalable, 3 mg/m^3 respirable

3. HAZARDS IDENTIFICATION

Emergency Overview:	Noncombustible glass beads. Spilled material is extremely slippery.
Eye contact:	When used for abrasive blasting, this material can rebound or fragment into sharp particles, which are hazardous to the eyes. Material as supplied is practically non-irritating to eyes.
Skin contact:	When used for abrasive blasting, this material can rebound or fragment into sharp particles, which are hazardous to the skin. Material as supplied is slightly irritating to skin.
Inhalation:	When used for abrasive blasting, this material can fragment into respirable particles and can also generate hazardous air contaminants from the material being blasted. Material as supplied may cause irritation to respiratory tract.
Ingestion:	No known hazard.
Chronic hazards:	Not listed by NTP, IARC or OSHA as a carcinogen.
Physical hazards:	Spilled material is extremely slippery. Noise is a major hazard in abrasive blasting processes. Abrasive blasting can generate heat, sparks, and static electrical charge.

Emissions Unit - General **Form EU0**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
03/27/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION		
Company Name: NxEdge, Inc.	Facility Name:	Facility ID No: 001-00202
Brief Project Description:	Facility Equipment and Throughput Modifications	

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION	
1. Emissions Unit (EU) Name:	NATURAL GAS-FIRED CURING OVEN
2. EU ID Number:	ECOVEN1
3. EU Type:	☐ New Source ☐ Unpermitted Existing Source ☒ Modification to a Permitted Source -- Previous Permit #:P-040007 Date Issued: 7/22/2005
4. Manufacturer:	WISCONSIN OVEN CORPORATION
5. Model:	EWN-612-8
6. Maximum Capacity:	600,000 BTU/HR OUTPUT
7. Date of Construction:	2003
8. Date of Modification (if any)	AWAITING PTC MODIFICATION APPROVAL- 2Q 2008
9. Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, complete the following section. If No, go to line 18.

EMISSIONS CONTROL EQUIPMENT						
10. Control Equipment Name and ID:						
11. Date of Installation:		12. Date of Modification (if any):				
13. Manufacturer and Model Number:						
14. ID(s) of Emission Unit Controlled:						
15. Is operating schedule different than emission units(s) involved?	☐ Yes ☐ No					
16. Does the manufacturer guarantee the control efficiency of the control equipment?	☐ Yes ☐ No (If Yes, attach and label manufacturer guarantee)					
	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						
17. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.						

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)	
18. Actual Operation	48 HRS/WEEK, 50 WEEKS/YR (NON-CONTINUOUS)
19. Maximum Operation	8760 HRS/YR

REQUESTED LIMITS	
20. Are you requesting any permit limits?	☐ Yes ☒ No (If Yes, check all that apply below)
☐ Operation Hour Limit(s):	
☐ Production Limit(s):	
☐ Material Usage Limit(s):	
☐ Limits Based on Stack Testing	Please attach all relevant stack testing summary reports
☐ Other:	
21. Rationale for Requesting the Limit(s):	

3.9 Fluoropolymer Area Curing Ovens

Curing of the parts coated in the Fluoropolymer Area occurs in three ovens. Small Halar-coated parts are typically cured in a Despatch SpecV-31 electric oven accessed via a pocket door from the Halar Powder Booth. Curing of Halar-coated parts is done at 500 degrees Fahrenheit. Small Teflon-coated parts are typically cured in a Despatch VRE2-35-1 electric oven accessed via a pocket door from the Teflon Powder Booth. Curing of Teflon-coated parts is done at approximately 700°F. If the size or number of the parts requires more room, parts can also be cured in a walk-in, gas-fired oven accessed via a pocket door from the third powder booth.

The gas-fired curing oven was included in the previous permit (ECOVEN1). For this permit application, NxEdge requests changes to the permit limits which allow more powder coating to be cured in the curing ovens.

All three curing ovens vent through rain-capped or downward angled roof stacks. The emissions from the electric ovens are only the small quantity of volatiles generated during coating curing. The gas-fired oven emissions also include combustion gases. Because all the stacks are located in the same area, and more emissions are generated by the gas-fired oven than the electric ovens, for air dispersion modeling all emissions associated with curing are modeled from the gas-fired oven stack. The emission point is shown as EP-3 on Form PP. The gas-fired oven is a Wisconsin Oven Corporation Model EWN-612-8, with a rated output of 0.6 MMBtu per hour. A specification sheet is attached.

Halar (ethylene chlorotrifluoroethylene) and Teflon PFA powder coatings may generate low levels of fluorine-containing gases at curing temperatures.[24] PFA weight loss has been measured at 0.20-0.25 wt% per hour with gases such as carbonyl fluoride produced. Tests on other polymers have generated ppm per hour levels of tetrafluoroethylene (TFE).[25] In addition, powder coatings can release up to 5 wt% VOCs during the curing process.[26]

Curing oven emissions are calculated in Table 3.9 based on 0.5 wt% of the powder coating being emitted as a fluoride compound and 5 wt% of the powder coating being emitted as VOCs. In the previous permit, controlled emissions were estimated based on 1000 lbs of powder cured per year. For this permit modification, NxEdge requests an increase to 4000 lbs powder per year and 400 lbs powder per day. This is the same basis as the powder sprayed in the FP Area Spray Booths (see

[24] The DuPont Company, "Thermal Performance of DuPont Fluoropolymer Resins and Toxicity of Degradation Products" (prepared for the "Guide to the Safe Handling of Fluoropolymer Resins," Third Edition, App. B, Part 1), June 1998.
[25] Colin Kinear, "TFE in Fluoropolymers" (included in the "Guide to the Safe Handling of Fluoropolymer Resins," Third Edition, App. A), October 1996.
[26] U.S.E.P.A Emission Inventory Improvement Program, "Preferred and Alternative Methods for Estimating Air Emissions from Surface Coating Operations," Chapter 7, Section 2.1.1, page 7, July 6, 2001.

Section 4.1).

The gas-fired curing oven is also used occasionally to "burn-off" Halar coatings at 800-900°F from metal parts, so the part can be given a fresh coating. While the actual burn-off emissions' composition is not known, in the worst case all of the chloride and fluoride in the Halar would react with hydrogen to produce hydrogen chloride and hydrogen fluoride gases. Estimated uncontrolled emissions from this scenario are calculated in Table 3.9 based on 20 typically-sized parts being burned off every day. In reality, burn-off operations occur zero to three times per month.

Finally, combustion emissions from the 0.6 MMBtu/hr-rated oven are calculated in Table 3.9. Combustion gas emissions include both criteria and TAP pollutants. The emissions were estimated assuming continuous oven operation, 8760 hours per year.

No permit limits are requested for the curing/burnoff oven or operations. Emissions of fluoride-compounds and VOCs from curing operations will be limited by the amount of powder sprayed in the coating booths and the proposed permit limits for that area. Uncontrolled emissions from gas combustion and burn-off operations are included in the air dispersion modeling and meet all ambient air quality standards (see Section 7).

Table 3-9:
Fluoropolymer Area Emissions- Curing and Burnoff Oven Emissions

FP Source: ECOVEN1	Curing Emissions	Coating	Restricted Daily Use (lb/day)	Restricted Annual Use (lb/yr)	Pollutant	Curing Emission Factor (wt% Feed)	Controlled Hourly Emissions (lb/hr)	Controlled Annual Emissions (ton/yr)
		Halar and Teflon Fluoropolymer Powders	400	4000	Flouride[1]	0.5%	0.0833	0.0100
					VOC[2]	5.0%	0.8333	0.100

FP Source: ECOVEN1	Burnoff Emissions	Coating	Description	CAS Number	Coating Content	Component Conc. (wt%)	Potential Burnoff Products	Maximum Generation Rate (wt% coating)	Parts Coating[3] (lbs/day)	Uncontrolled Emissions (lb/hr)	Uncont. Emissions (ton/yr)
		Halar	Ethylene chloro trifluoro ethylene $(C_4H_4F_3Cl)_n$	25101-45-5	Carbon	33.2%	CO[4]	7.8%	1.21	0.0039	0.017
					Chlorine	24.5%	HCl[5]	25.2%		0.013	0.056
					Fluorine	39.4%	HF (as F)[5]	39.4%		0.020	0.087
					Hydrogen	2.8%					

FP Source: ECOVEN1	Combustion Gas Emissions	Fuel-Burning Equipment	Rated Output (MMBtu/hr)	On-Line Rating		Fuel	Fuel Rate[6] (scfh)	Emission Factors AP-42 Tables 1.4-1 to 1.4-4		Uncontrolled Emissions (ECOVEN1)	
				Actual	Used			Pollutant	lb/10^6 scf	lb/hr	tons/yr
		Curing Oven Wisconsin Oven Corporation EWN-612-8	0.60	1040	8760	Natural Gas	735	NO_x	100	7.4E-02	0.32
								CO	84	6.2E-02	0.27
								PM_{10}	7.6	5.6E-03	0.024
								SO_2	0.6	4.4E-04	0.0019
								VOC	5.5	4.0E-03	0.018
								Arsenic	2.0E-07	1.2E-07	5.2E-07
								Barium	4.3E-06	2.6E-06	1.1E-05
								Benzene	2.1E-06	1.2E-06	5.4E-06
								Cadmium	1.1E-06	6.5E-07	2.8E-06
								Chromium	1.4E-06	8.2E-07	3.6E-06
								Cobalt	8.2E-08	4.9E-08	2.2E-07
								Copper	8.3E-07	5.0E-07	2.2E-06
								Dichlorobenzene	1.2E-06	7.1E-07	3.1E-06
								Formaldehyde	7.4E-05	4.4E-05	1.9E-04
								Hexane	1.8E-03	1.1E-03	4.6E-03
								Manganese	3.7E-07	2.2E-07	9.8E-07
								Mercury	2.5E-07	1.5E-07	6.7E-07
								Molybdenum	1.1E-06	6.5E-07	2.8E-06
								Naphthalene	6.0E-07	3.6E-07	1.6E-06
								Nickel	2.1E-06	1.2E-06	5.4E-06
								Pentane	2.5E-03	1.5E-03	6.7E-03
								Toluene	3.3E-06	2.0E-06	8.8E-06
								Vanadium	2.3E-06	1.4E-06	5.9E-06
								Zinc	2.8E-05	1.7E-05	7.5E-05

Notes:

1. PFA weight loss has been measured at 0.20-0.25 wt% per hour with gases such as carbonyl fluoride produced. Tests on other polymers have generated ppm per hour levels of tetrafluoroethylene (TFE). 0.5 wt% flouride generation used for these calculations. Source: The DuPont Company, "Guide to the Safe Handling of Fluoropolymer Resins," Third Edition.
2. Powder coatings have 0.5-5% VOC content. Actual average emissions curing emissions are 1% VOC, but 5% VOC generation used for these calculations. Source: RTI 2000 Coatings Guide (and referenced in EPA EIIP Vol II, Chap 7, p. 7.2-7).
3. Based on 20 typical parts ("smurfs') with a fluoropolymer coating weight of 0.0605 lbs per part treated per day in burn-off oven. Actual operations are a few parts burned off 1-3 times per month.
4. Assume 10% conversion of carbon to carbon monoxide.
5. ECTFE contains enough H to react with all Cl and F to form HCl and HF.
6. Assume 80% efficiency, natural gas heating value of 1020 Btu/scf.

ENHANCED WALK-IN OVEN DATA SHEET

Unequaled Standard Features

- Temperatures to 500° F (optional 650° F and 800° F operation)
- High Volume, Low Velocity, Combination Air Flow for Excellent Temperature Uniformity and Today's Powder Applications
- Air Flow Pressure Switches on All Blowers
- Adjustable "H" Pattern Style Ductwork
  - Supply ducts on each side, full length of chamber
  - Full ceiling return ducts
- Heavy Gauge Construction with Aluminized Interior
- Heavy Duty Doors with Ball Bearing Hinges
- Roof Mounted Components to Minimize Valuable Floor Space
- Flow through operation, if required
- NEMA 12 Control Enclosure, Fully Wired & Factory Tested (Disconnect Switch standard on Gas Fired Ovens!)
- Microprocessor based temperature controller with "auto-tune"

Wisconsin Oven Corporation
2675 Main Street P.O. Box 873
East Troy, WI 53120 USA

phone 1(262) 642-3938
www.wisoven.com

fax 1(262) 363-4018
sales@wisoven.com

Item Number	W H L EWN- WL-H	CFM x 100	Horsepower	Kilowatts - Electric Ovens	*BTU's X 1,000 - Gas Ovens*	Cubic Feet of Chamber	Chamber Width	Chamber Length	Chamber Height	*Outside Width* Add 13" for Control Panel for Overall Width*	Outside Length*	Outside Height* Includes roof mounted blowers	Approximate Weight
1	EWN- 44-4	34	3	36	250	64	4'	4'	4'	6'	5'	7'9"	2,115
2	EWN- 44-5	34	3	36	250	80			5'			8'9"	2,320
3	EWN- 44-6	34	3	36	250	96			6'			9'9"	2,625
4	EWN- 44-7	34	3	48	250	112			7'			10'9"	2,845
5	EWN- 44-8	34	3	48	250	128			8'			11'9"	3,055
6	EWN- 45-4	34	3	36	250	80	4'	5'	4'	6'	6'	7'9"	2,295
7	EWN- 45-5	34	3	48	250	100			5'			8'9"	2,515
8	EWN- 45-6	34	3	48	250	120			6'			9'9"	2,840
9	EWN- 45-7	34	3	48	325	140			7'			10'9"	3,080
10	EWN- 45-8	34	3	48	325	160			8'			11'9"	3,315
11	EWN- 46-4	34	3	48	250	96	4'	6'	4'	6'	7'	7'9"	2,470
12	EWN- 46-5	34	3	48	250	120			5'			8'9"	2,710
13	EWN- 46-6	34	3	48	325	144			6'			9'9"	3,050
14	EWN- 46-7	34	3	48	325	168			7'			10'9"	3,315
15	EWN- 46-8	34	3	48	325	192			8'			11'9"	3,570
16	EWN- 48-4	34	3	48	325	128	4'	8'	4'	6'	9'	7'9"	2,815
17	EWN- 48-5	34	3	48	325	160			5'			8'9"	3,095
18	EWN- 48-6	34	3	60	325	192			6'			9'9"	3,480
19	EWN- 48-7	45	5	60	325	224			7'			10'9"	3,915
20	EWN- 48-8	45	5	60	400	256			8'			11'9"	4,210
21	EWN- 55-5	34	3	48	250	125	5'	5'	5'	7'	6'	8'9"	2,745
22	EWN- 55-6	34	3	48	325	150			6'			9'9"	3,035
23	EWN- 55-7	34	3	48	325	175			7'			10'9"	3,285
24	EWN- 55-8	34	3	48	325	200			8'			11'9"	3,540
25	EWN- 56-5	34	3	48	325	150	5'	6'	5'	7'	7'	8'9"	2,945
26	EWN- 56-6	34	3	48	325	180			6'			9'9"	3,255
27	EWN- 56-7	34	3	60	400	210			7'			10'9"	3,530
28	EWN- 56-8	45	5	60	400	240			8'			11'9"	3,940
29	EWN- 58-5	34	3	60	325	200	5'	8'	5'	7'	9'	8'9"	3,355
30	EWN- 58-6	45	5	60	400	240			6'			9'9"	3,840
31	EWN- 58-7	45	5	60	400	280			7'			10'9"	4,155
32	EWN- 58-8	45	5	60	400	320			8'			11'9"	4,470
33	EWN- 510-6	45	5	72	400	300	5'	10'	6'	7'	11'	9'9"	4,425
34	EWN- 510-8	45	5	72	500	400		10'	8'		11'	11'9"	4,760
35	EWN- 512-6	45	5	72	500	360		12'	6'		13'	9'9"	4,500
36	EWN- 512-8	45	5	72	600	480		12'	8'		13'	11'9"	4,895
37	EWN- 66-6	45	5	60	400	216	6'	6'	6'	8'	7'	9'9"	3,600
38	EWN- 66-7	45	5	60	400	252			7'			10'9"	3,885
39	EWN- 66-8	45	5	60	400	288			8'			11'9"	4,175
40	EWN- 68-6	45	5	60	400	288	6'	8'	6'	8'	9'	9'9"	4,065
41	EWN- 68-7	45	5	72	400	336			7'			10'9"	4,395
42	EWN- 68-8	45	5	72	400	384			8'			11'9"	4,725
43	EWN- 610-6	45	5	84	500	360	6'	10'	6'	8'	11'	9'9"	4,585
44	EWN- 610-8	45	5	84	600	480		10'	8'		11'	11'9"	5,300
45	EWN- 612-6	45	5	84	500	432		12'	6'		13'	9'9"	5,040
46	EWN- 612-8	70	705	84	600	576		12'	8'		13'	11'9"	5,490
47	EWN- 88-8	45	5	72	600	512	8'	8'	9'	10'	11'9"		5,760
48	EWN- 810-8	70	705	84	700	640		10'	11'				6,624
49	EWN- 812-8	70	705	84	750	768		12'	13'				7,488
50	EWN- 814-8	86	10	108	800	896		14'	15'				8,352
51	EWN- 816-8	86	10	120	850	1024		16'	17'				9,216
52	EWN-1010-8	70	705	84	750	800	10'	10'	11'	12'	11'9"		7,200
53	EWN-1012-8	86	10	108	800	960		12'	13'				8,064
54	EWN-1014-8	140	15	120	850	1120		14'	15'				8,928
55	EWN-1016-8	140	15	132	950	1280		16'	17'				9,792

* Dimensions are approximate

Emissions Units - Spray Paint Booth Information **Form EU3**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 3
03/27/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

Company Name:	Facility Name:	Facility ID No:
NxEdge, Inc.		001-00202

Brief Project Description: Facility Equipment and Throughput Modifications

BOOTH INFORMATION

1. Booth Type: ☐ New Booth ☐ Unpermitted Existing Booth
☒ Modification to a Permitted Booth, Permit #: P-040007, Date Issued: 7/22/2005

2. Construction Date: Awaiting PTC Modification Approval : (2Q 2008)

SPRAY GUN DESCRIPTION AND SPECIFICATIONS

Gun No.	3. Manufacturer	4. Model	5. Type	6. Transfer Eff. %	7. Rated Capacity (gal/hr)
1	Astro Pneumatic Tool Co.	QUL-HVLP	HVLP Gravity Feed	65% max	
2					
3					
4					

Number of guns to be used simultaneously: 1

SPRAY MATERIAL DESCRIPTION AND SPECIFICATIONS

8. Type of Spray Material Used	9. Type of Material Coated	10. Max. Usage (gal/day)	11. Solid TAP/HAP Content (lb/gal)	12. VOC TAP/HAP Content (lb/gal)	13. MSDS Attached? (Y/N)
Wet FP Coatings (see Table 4.1)	Metal	50	see Table 4.1	see Table 4.1	y

REQUEST FOR PERMIT LIMITATIONS

14. Are you requesting any permit limits? ☐ No ☒ Yes. If Yes, check all that apply below and fill in requested limit(s)

☐ Operation Hour Limits:	☐ Production Limits:
☒ Material Usage Limits: 5 gal/day and 50 gal/year of individual wet coatings (four booth total)	☒ Other: MDI emissions limit = 0.53 lb/day

15. Rationale for Requesting the Limit(s): Meet ambient air quality standards for TAPs.

EMISSION CONTROL DEVICE (FILTER[b]) DESCRIPTION AND SPECIFICATIONS

Stack Served	16. Filter Manufacturer	17. Model	18. PM Control Efficiency(%)[a]	19. Dimension (Total Area, Thickness and Number of Filters)
Stack 1	Paint Pockets	PP	98.13	55.6 ft2, 20 filters at 20 inch by 20 inch each
Stack 2				
Stack 3				
Stack 4				

Notes: a. Provide either stack test data or vendor's documentation to support the control efficiency specified above.
b. Fill out and submit appropriate control equipment form(s) if this booth has a control device(s) other than a filter system.

BOOTH OPERATING SCHEDULE (indicate hours/day, hours/year, or other)

20. Actual Operation:	21. Maximum Operation:
8 hrs/day (non-continuous), 5 days/week	12 hrs/day (non-continuous), 6 days/week

Emissions Units - Spray Paint Booth Information **Form EU3**

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IDENTIFICATION

Company Name:	Facility Name:	Facility ID No:
NxEdge, Inc.		001-00202

Brief Project Description: Facility Equipment and Throughput Modifications

BOOTH INFORMATION

1. Booth Type: ☐ New Booth ☐ Unpermitted Existing Booth
☒ Modification to a Permitted Booth, Permit #: P-040007, Date Issued: 7/22/2005

2. Construction Date: Awaiting PTC Modification Approval : (2Q 2008)

SPRAY GUN DESCRIPTION AND SPECIFICATIONS

Gun No.	3. Manufacturer	4. Model	5. Type	6. Transfer Eff. %	7. Rated Capacity (gal/hr)
1	ITW Gema	Easy 1-L	Electrostatic	60%	
2	Nordsen	TriboMatic II	Electrostatic	60%	
3					
4					

Number of guns to be used simultaneously: 1

SPRAY MATERIAL DESCRIPTION AND SPECIFICATIONS

8. Type of Spray Material Used	9. Type of Material Coated	10. Max. Usage (gal/day)	11. Solid TAP/HAP Content (lb/gal)	12. VOC TAP/HAP Content (lb/gal)	13. MSDS Attached? (Y/N)
Halar Powders	Metal	400 lb/day	0	5 wt% max	y

REQUEST FOR PERMIT LIMITATIONS

14. Are you requesting any permit limits? ☐ No ☒ Yes. If Yes, check all that apply below and fill in requested limit(s)

☐ Operation Hour Limits:	☐ Production Limits:
☒ Material Usage Limits: 400 lb/day and 4000 lb/yr owder sprayed (four booth total)	☐ Other:

15. Rationale for Requesting the Limit(s): Meet PM10 ambient air quality standards.

EMISSION CONTROL DEVICE (FILTER[b]) DESCRIPTION AND SPECIFICATIONS

Stack Served	16. Filter Manufacturer	17. Model	18. PM Control Efficiency(%)[a]	19. Dimension (Total Area, Thickness and Number of Filters)
Stack 1				
Stack 2	Paint Pockets	PP	99.7%	25 ft2, 9 filters at 20 inch by 20 inch each
Stack 3				
Stack 4				

Notes: a. Provide either stack test data or vendor's documentation to support the control efficiency specified above.
b. Fill out and submit appropriate control equipment form(s) if this booth has a control device(s) other than a filter system.

BOOTH OPERATING SCHEDULE (indicate hours/day, hours/year, or other)

20. Actual Operation:	21. Maximum Operation:
8 hrs/day (non-continuous), 5 days/week	12 hrs/day (non-continuous), 6 days/week

Emissions Units - Spray Paint Booth Information **Form EU3**

PERMIT TO CONSTRUCT APPLICATION

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SPRAY GUN DESCRIPTION AND SPECIFICATIONS

Gun No.	3. Manufacturer	4. Model	5. Type	6. Transfer Eff. %	7. Rated Capacity (gal/hr)
1	ITW Gema	Easy 1-L	Electrostatic	60%	
2	Nordsen	TriboMatic II	Electrostatic	60%	
3					
4					

Number of guns to be used simultaneously: 1

SPRAY MATERIAL DESCRIPTION AND SPECIFICATIONS

8. Type of Spray Material Used	9. Type of Material Coated	10. Max. Usage (gal/day)	11. Solid TAP/HAP Content (lb/gal)	12. VOC TAP/HAP Content (lb/gal)	13. MSDS Attached? (Y/N)
Teflon Powders	Metal	400 lb/day	0	5 wt% max	y

REQUEST FOR PERMIT LIMITATIONS

14. Are you requesting any permit limits? ☐ No ☒ Yes. If Yes, check all that apply below and fill in requested limit(s)

☐ Operation Hour Limits:	☐ Production Limits:
☒ Material Usage Limits: 400 lb/day and 4000 lb/yr owder sprayed (four booth total)	☐ Other:

15. Rationale for Requesting the Limit(s): Meet PM10 ambient air quality standards.

EMISSION CONTROL DEVICE (FILTER[b]) DESCRIPTION AND SPECIFICATIONS

Stack Served	16. Filter Manufacturer	17. Model	18. PM Control Efficiency(%)[a]	19. Dimension (Total Area, Thickness and Number of Filters)
Stack 1				
Stack 2				
Stack 3	Paint Pockets	PP	99.7%	25 ft2, 9 filters at 20 inch by 20 inch each
Stack 4				

Notes: a. Provide either stack test data or vendor's documentation to support the control efficiency specified above.
b. Fill out and submit appropriate control equipment form(s) if this booth has a control device(s) other than a filter system.

BOOTH OPERATING SCHEDULE (indicate hours/day, hours/year, or other)

20. Actual Operation: 8 hrs/day (non-continuous), 5 days/week	21. Maximum Operation: 12 hrs/day (non-continuous), 6 days/week